

INTEROFFICE CORRESPONDENCE

DATE:

November 9, 1994

TO:

Distribution

FROM:

L. M. Brooks, ERPD Program Support, Building 080, X6973

SUBJECT:

UPDATE ON APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

STRATEGY - LMB-030-94

DOE Order:

4700.1

Action:

None

Attached is the draft "Master List" of potential Applicable or Relevant and Appropriate Requirements (ARARs) that may apply to the Rocky Flats Environmental Technology Site which was submitted to the regulators on November 7, 1994.

The Department of Energy, Rocky Flats Field Office (DOE, RFFO) has requested a meeting to be held on November 16, 1994, with the Environmental Protection Agency and the Colorado Department of Public Health and Environment to discuss the Master List. Currently I do not anticipate that everyone on the EG&G ARARs team would need to attend the initial and/or subsequent meetings with the regulators. However, if it is known in advance what area of the Masters List is to be discussed at a ARARs working group meeting, the expert in that area should plan on attending the meeting. I will keep everyone posted as to when the initial meeting will actually occur and what is scheduled to be discussed, if known.

Thanks to everyone on the EG&G ARARs team for contributing to the development of the Masters List. This has been a challenging process and could not have been completed as quickly as it was done without each of you supporting and contributing to the effort. THANK YOU!!

kld

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ARAR/TBC DEFINITION AND IDENTIFICATION

As required by CERCLA Section 121(d), remedial actions must clean up hazardous substances, pollutants, and contaminants released into the environment. This section also requires that, with respect to any hazardous substance, pollutant, or contaminant that will remain onsite, the remedial action achieve, at completion, a level or standard of control for such hazardous substance, pollutant, or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criterion, or limitation under Federal environmental law or any promulgated standard, requirement, criterion, or limitation under a State environmental or facility siting law that is more stringent than the Federal standard, requirement, criterion, or limitation.

The purpose of this document is to identify a master list of potential applicable or relevant and appropriate requirements (ARARs) and To Be Considered (TBC) standards for onsite remedial actions being conducted at the Rocky Flats Environmental Technology Site (RFETS). The master list of potential ARARs is provided as Table 1 and will be used as the basis to select the ARARs that will need to be adhered to for the onsite remedial alternatives identified for individual Operable Units (OUs). The purpose of Table 1 is to promote consistency in the ARAR identification process at the RFETS and to facilitate the development of a consistent means to comply with the identified ARARs.

Table 1 is intended to be a tool to be used as a starting point for identifying ARARs on a remedial alternative basis. Table 1 may be too extension for some remedial alternatives and may not include every potential ARAR for other alternatives. The NCP and EPA guidelines state that the identification of ARARs is conducted on a site-specific basis for each remedial action under consideration. The rationale as to why a particular statutory or regulatory requirement is determined to be an ARAR is to be documented for each remedial action alternative being considered during the detailed analysis of alternatives. Since chemical-specific ARARs will generally be the same for all alternatives, a single list is sufficient and does not need to be repeated for each alternative. Documentation may also be appropriate in some cases when a potential ARAR is initially identified but ultimately is determined not to be an ARAR. The factors associated with the elimination of the initially identified ARAR should be explained in sufficient detail so that the basis of the decision can be understood by the approving authority. The above documentation will be presented as an appendix to the Corrective Measures Study/Feasibility Study (CMS/FS) report.

The remainder of this introduction section is devoted to explaining the ARAR identification process and to provide additional details regarding the development of Table 1.

ARAR Definitions

To ensure protection of human health and the environment, and to ensure proper management of remediation waste, the lead agency, in conjunction with the supporting agencies, is required to identify those promulgated standards, requirements, criteria, or limitations that will be met during the implementation of the remedy. The identified promulgated standards, requirements, criteria, or limitations are called ARARs. As defined in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), ARARs are as follows:

Applicable Requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site. Only those standards that are identified by a State in a timely manner and that are more stringent than Federal requirements may be applicable. [See 40 CFR 300.5]

Relevant and Appropriate Requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those State standards that are identified in a timely manner and are more stringent than Federal requirements may be relevant and appropriate. [See 40 CFR 300.5]

Types of ARARs

The EPA established the three ARAR categories listed below to identify and classify ARARs. The categories are used as guidance since some ARARs do not necessarily fall into this classification system. The type of ARAR is identified in the "Type" column in Table 1.

- Chemical-specific requirements are usually health- or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the acceptable amount or concentration of a chemical that may be found in or discharged to the ambient environment (i.e., air emissions, wastewater discharges, etc.).
- Location-specific requirements are restrictions placed on the concentration of hazardous substances solely because they occur in special locations. Typical location restrictions include areas with sensitive or unique characteristics such as wetlands, areas of historical significance, or areas situated in locations requiring special precautions because of seismic activity or floodplains.

• Action-specific requirements are usually technology- or activity-based requirements or limitations on actions taken with respect to management of the remediation waste or closure of the facility. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy.

To-Be-Considered Standards

In addition to ARARs, the lead and support agencies may, when appropriate, identify other non-promulgated advisories, criteria, guidance documents, or proposed regulations that are TBC to supplement an ARAR provision for a particular release. TBCs are typically issued by Federal or State governments, are not legally binding, and do not have the status as potential ARARs. However, TBCs are used in determining the necessary level of cleanup for the protection of human health and the environment. The March 8, 1990 preamble to the final NCP rule (see 55 FR 8746) indicates that the use of TBCs is discretionary rather than mandatory; however, their incorporation is recommended.

Of particular importance to the RFETS is the inclusion of DOE Orders along with or in lieu of other identified ARARs and TBCs. Since DOE Orders are not promulgated standards, they do not qualify as ARARs under the CERCLA definitions. However, DOE Orders may be contractually enforceable on contractors that operate or manage a DOE facility. To the extent that DOE Orders supplement the implementation of an identified ARAR, they will be treated as TBCs to develop a protective remedy. Where DOE Orders conflict with an identified ARAR, either contractual relief from DOE, regulatory variance, statutory inconsistency determination (i.e., RCRA Section 1006), or a CERCLA waiver may be required.

State ARARs

Under the NCP and CERCLA Section 121, remedial actions must comply with ARARs which include State promulgated environmental regulations that are more stringent than Federal environmental requirements and that are identified in a timely manner by the State. With respect to potential State ARARs, the term "promulgated" is defined to mean regulations of "general applicability [and] legally enforceable" [See 40 CFR 300.400(g)]. A State requirement or standard is "of general applicability" if it applies to similar situations in the State. The March 8, 1990 preamble to the NCP defines the term "legally enforceable" to mean State regulations issued in accordance with pertinent State procedures and that "contain specific enforcement provisions or [are] otherwise enforceable under State law" (See 55 FR 8746).

In terms of identifying more stringent State requirements as ARARs, Section 121(d)(2)(C) of CERCLA states that "[A] State standard, requirement, criteria, or limitation (including any State siting standard or requirement) which could effectively result in the statewide prohibition of land disposal of hazardous substances, pollutants, or contaminants shall not apply" unless the following conditions are met:

- The State standard, requirement, criterion, or limitation is of general applicability and was adopted by formal means;
- The State standard, requirement, criterion, or limitation was adopted on the basis of hydrologic, geologic, or other relevant considerations and was not adopted for the purpose of precluding onsite remedial actions or other land disposal for reasons unrelated to protection of human health and the environment; and
- The State arranges for, and assures payment of the incremental costs of utilizing, a facility for disposition of the hazardous substances, pollutants, or contaminants.

Offsite Response Actions

Offsite response actions must comply with all legally applicable requirements, both substantive and administrative. The concept of "relevant and appropriate" is not available for offsite actions [See page xvii, CERCLA Compliance with Other Laws Manual Part I (EPA/540/G-89/006).] Therefore, the determination of whether the response action is either onsite or offsite is critical in determining what requirements must be complied with. Especially, for air, wastewater, and underground injection discharges. Table 1 is not inclusive of all regulatory requirements that may be applicable to offsite response actions.

Delegation of Presidential CERCLA Responsibilities

The presidential provisions for implementing CERCLA were delegated to various federal agencies in accordance with Executive Order 12580. This Executive Order delegates certain aspects to the Secretary of Energy with respect to releases or threatened releases where either the release is on any facility or the sole source of the release is from any facility or vessel under the jurisdiction, custody, or control of the DOE. These functions must be exercised consistent with the requirements of CERCLA Section 120. [See Executive Order 12580, Section 2(d)]. CERCLA Section 120(a) states,

"Each department... of the United States... shall be subject to, and comply with [CERCLA] in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity.... All guidelines, rules, regulations, and criteria which are applicable [to other facilities]... shall also be applicable to facilities which are owned or operated by a department... of the United States.... No department... may adopt or utilize any such guidelines, rules, regulations, or criteria which are inconsistent with the guidelines, rules, regulations, and criteria established by the [EPA] under [CERCLA]."

Specifically with respect to the identification of ARARs and TBCs, the NCP [40 CFR 300.430(g)] states,

"The lead and support agencies shall identify requirements applicable to the release or the remedial action... If ... a requirement is not applicable, the requirement may still be relevant and appropriate.... In addition to applicable or relevant and appropriate requirements, the lead and support agencies may, as appropriate, identify other advisories, criteria, or guidance to be considered [TBC] for a particular release."

As provided by Executive Order 12580 and defined in the NCP, the DOE is the lead agency where the release is on a facility, or the sole source of the release is from, a facility or vessel under the jurisdiction, custody, or control of the DOE. [Also see DOE's responsibilities as identified in 40 CFR 300.175(b)(5).] The support agency furnishes data, reviews documents, may concur on decision documents, and provides other assistance as requested by the Remedial Project Manager. The EPA or a state may be support agencies pursuant to an agreement. The IAG is considered the agreement that establishes the functions of the lead and support agencies. However, provisions which dictate how ARARs and TBCs are to be identified are not specified in the IAG. In the absence of these specific IAG provisions, the DOE must follow all guidelines, rules, regulations, and criteria in the same manner and to the same extent as any nongovernmental entity.

ARAR Identification Process

The process of identifying ARARs and TBCs is specified in CERCLA Section 121, 40 CFR 300.400(g), 40 CFR 300.430(e)(2), and 40 CFR 300.515(d). In addition to the above-mentioned statutory and regulatory requirements, the EPA has published the following guidance documents for identification of ARARs and TBCs.

- CERCLA Compliance with Other Laws Manual: Interim Final (EPA/540/G-89/006), August 1988;
- CERCLA Compliance with Other Laws Manual: Part II. Clean Air Act and Other Environmental Statutes and State Requirements (EPA/540/G-89/009), August 1989;
- Superfund LDR Guide #5 Determining When Land Disposal Restrictions Are <u>Applicable</u> to CERCLA Response Action (OSWER 9347.3-05FS), July 1989;
- Superfund LDR Guide #7 Determining When Land Disposal Restrictions Are <u>Relevant and Appropriate</u> to CERCLA Response Action (OSWER 9347.3-07FS), December 1989;

- ARARS Q&As: Compliance with Federal Water Quality Criteria (OSWER 9234.2-09/FS), June 1990;
- ARARS Q&As: Compliance with the Toxicity Characteristics Rule: Part 1 (OSWER 9234.2-08/FS), May 1990;
- ARARs Q&As: General Policy RCRA, CWA, SDWA (OSWER 9234.2-01/FS), May 1989;
- ARARS Q&As: The Fund-Balancing Waiver (OSWER 9234.2-13/FS), January 1991;
- CERCLA Compliance with Other Laws Manual: RCRA ARARs Focus on Closure Requirements (OSWER 9234.2-04/FS), October 1989; and
- CERCLA Compliance with Other Laws Manual: Overview of ARARs Focus on ARAR Waivers (OSWER 9234.2-03/FS), December, 1989.

The process of identification of ARARs is described and graphically depicted in Section 1.2.4 of the CERCLA Compliance with Other Laws Manual: Interim Final (EPA/540/G-89/006), August 1988. In general, the identification process involves a two-part evaluation to determine if the promulgated environmental requirement is applicable or, if not applicable, relevant and appropriate.

The first step in this process is to determine if the requirement is applicable. The basic criterion for determining if a requirement is applicable is that it directly and fully addresses or regulates the hazardous substance, pollutant, contaminant, action being taken, or other circumstance at the site. To determine if the particular requirement is legally applicable, it is necessary to refer to the terms, definitions, and jurisdictional prerequisites of the statute or regulation. All pertinent jurisdictional prerequisites must be met for the requirement to be applicable. In addition, previous court decisions could also play an important role in determining if a particular requirement is applicable.

If the requirement is not applicable, the second step is to decide if it is <u>both</u> relevant and appropriate. The basic considerations to make this decision are to determine if the requirement 1) regulates or addresses problems or situations sufficiently similar to those encountered at the CERCLA site (i.e., relevance), and 2) is appropriate to the circumstances of the release or threatened release such that its use is well suited to the particular site. Determining if requirements are relevant and appropriate is site-specific and must be based on best professional judgement including the characteristics of the remedial action, the hazardous substances present at the site, and the physical circumstances of the site and of the release. The site-specific conditions must be compared to the statutory or regulatory requirements. The EPA further clarifies that requirements determined to be relevant and appropriate do not need to be legally enforceable (see 58 FR 8743).

Requirement	Citation	Туре	Comment
ATOMIC ENERGY ACT (AEA) [42 USC 2200 et. seq.]			
RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT	DOE Order 5400.5 {10 CFR 834, Proposed}		This DOE Order establishes criteria for the protection of human health and the environment to ensure radiation exposure resulting from DOE activities does not exceed an
Radiation Protection Standard - All Pathways	Chapter II.1a and III {834.101}		effective equivalent dose for 100 mrem per year. This radiation dose limit also forms the basis for the release of radionuclides to the environment and the release of
Radiation Protection Standard - Airborne Emissions	Chapter II.1b {834.102}		properties for unrestricted use.
Radiation Protection Standard - TRU Waste Storage/Disposal	Chapter II.1c {834.109}	TBC	
ALARA Process Effluent Discharges to Surface Waters	Chapter II.2 {834.11}		
 Effluent Discharges to Surface Waters Effluent Discharges to Sanitary Sewer Systems 	Chapter II.3a {834.201}		
Residual Radioactivity Levels (Real Property, Materials, and	Chapter II.3d {834.203} Chapter II.5 and IV		
Equipment)	{834, Subpart D}		
Monitoring and Surveillance	Chapter II.6 {834.10}		
RADIATION PROTECTION OF THE PUBLIC	10 CFR 20		For onsite response actions, NRC requirements are not
			applicable to CERCLA activities conducted at the RFETS;
Radiation Protection Standard - All Pathways	.1301		DOE is required to and has established programs to manage radioactive operations and waste. Although NRC
Effluent Discharges to Sanitary Sewer Systems	.2003		regulations may be relevant, these NRC standards are not
Treatment or Disposal by Incineration	.2004		considered to be appropriate if DOE Orders adequately
Disposal of Specific Waste	.2005	TBC	establish standards of control for the management of
			radioactive materials to ensure protection of human health and the environment. In cases where a DOE Order
			specifies requirements that are inconsistent with NRC
			standards, the DOE requirement will be followed unless
v.			specifically waived by DOE in order to adopt the NRC standard.

L-TBC



Action-Specific ARAR Α-

Chemical-Specific ARAR Location- Specific ARAR To Be Considered

Requirement	Citation	Туре	Comment				
ATOMIC ENERGY ACT (AEA) [42 USC 2200 et. seq.]	ATOMIC ENERGY ACT (AEA) [42 USC 2200 et. seq.]						
RADIOACTIVE WASTE MANAGEMENT	DOE Order 5280.2A						
 Management of Transuranic Waste Temporary Storage at Generating Sites Management of Low-Level Waste Performance Objectives Performance Assessment Waste Characterization Disposal Disposal Site Closure/Post Closure Environmental Monitoring 	Chapter II	ТВС					
ENVIRONMENTAL RADIATION PROTECTION STANDARDS FOR MANAGEMENT AND DISPOSAL OF SPENT NUCLEAR FUEL, HIGH-LEVEL AND TRANSURANIC RADIOACTIVE WASTES	40 CFR 191	С	Standard applies to transuranic wastes only.				
Radiation Dose Standard	.03(b)						

TBC To Be Considered

Action-Specific ARAR Α-

Chemical-Specific ARAR
Location- Specific ARAR L-

Requirement	Citation	Туре	Comment
ATOMIC ENERGY ACT (AEA) [42 USC 2200 et. seq.]			
LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE	10 CFR 61		
 Radiation Protection Access Restrictions Future Impacts Site Siting/Stability Drainage Controls/Floodplains 	.41 & .52(a)(6) .42 .50(a)(2), (3) & (11) .50(a)(4), (7), (8), (9) & (10) .50(a)(5), (6) &	ТВС	
 Final Cover Buffer Zone Ground Water Monitoring Waste Disposal Requirements 	.51(a)(4), (5), (6), (9), & (10) .51(a)(1) & .52(a)(2) .52(a)(8) & .53(d) .53 .55, .56, & .52(a)(11)		



Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered L-

Requirement	Citation	Туре	Comment			
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]						
 AMBIENT AIR QUALITY STANDARDS Sulfur Dioxide Particulate Matter (PM10) Carbon Monoxide Ozone Nitrogen Dioxide Lead Total Suspended Particulates 	5 CCR 1001-14 [40 CFR 50]	С	Ambient air quality standards are considered to be chemical- specific ARARs to assess the quality of ambient air and the need to remediate a particular IHSS to maintain the quality of the ambient air. RFETS is located in a non-attainment zone for particulate matter and ozone. Ambient air quality standards are not effluent discharge limitations; they are used in conjunction with air dispersion modeling to establish discharge limits that are protective of air quality.			
 COLORADO AIR POLLUTION REGULATIONS Emission Control Regulations for Particulates, Smokes, Carbon Monoxide, and Sulfur Oxides Particulates Emission Monitoring Requirements for Existing Sources Sulfur Dioxide Emission Regulations Odor Emissions Standards of Performance for New Stationary Sources Emissions of Volatile Organic Compounds Control of Hazardous Air Pollutants 	5 CCR 1001 [40 CFR 52, Subpart G] Regulation No. 1 Regulation No. 2 Regulation No. 6 Regulation No. 7 Regulation No. 8	A	Regulation No. 1, Section III.D(2)(b), (e), (f), and (h) requires control measurements to be implemented for construction activities, haul roads, haul trucks, and demolition activities, respectively, to prevent the emission of fugitive particulates in excess of air standards. Other portions of Regulation No. 1 would be an ARAR only if the remedial action involves the specific emission source regulated. Regulation No. 2 prohibits odorous air contaminants from any single source to be emitted in detectable odors which are measured in excess of the air standards. Regulation Nos. 6, 7, 8, and 15 would be an ARAR only if the remedial action involves the specific emission source regulated.			
Emissions of Ozone-Depleting Compounds	Regulation No. 15					

A -

Action-Specific ARAR Chemical-Specific ARAR C -

Location- Specific ARAR
To Be Considered L -

Requirement	Citation	Туре	Comment
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS • National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities - Standard - Emission Monitoring and Test Procedures - Compliance and Reporting • National Emission Standards for Radon Emissions from Department of Energy Facilities - Standard - Exemption from the Reporting and Testing Requirements of 40 CFR 61.10	40 CFR 61, Subpart H .92 .93 .94 40 CFR 61, Subpart Q .192 .193	Α	Demonstration of compliance with 40 CFR 61.92 is performed on a sitewide basis taking into consideration all RFETS sources. Stack monitoring is required for all release points which could contribute greater than 0.1 mrem/yr. 40 CFR 61.192 was developed primarily for UMTRA sites. Application of the standard to the container storage of waste within structures is questionable.

Α-

Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered **C** -

L-TBC

Requirement	Citation	Туре	Comment		
FEDERAL WATER POLLUTION CONTROL ACT {aka Clean Water Act (CWA)} [33 USC 1251 et. seq.]					
WATER QUALITY CRITERIA - GOLD BOOK	33 USC 1314 (CWA Section 304)	С	The "Gold Book" presents guidelines with respect to water quality criteria for toxic pollutants. Criteria are published for aquatic and human health. The water quality criteria are not promulgated standards; however, they are established guidelines used for developing NPDES permits and may be considered potentially relevant and appropriate. WQC should not be used as effluent limits, rather discharge limits should be established either through the NPDES or UIC permitting process. Although water criteria are non-promulgated and non-enforceable standards, Section 121(d)(2)(B)(i) of CERCLA as implemented by the NCP (40 CFR 300.430(e)(2)(i)(E)) specifies that WQC established under Sections 303 and 304 of the CWA shall be attained where relevant and appropriate under the circumstances of the release. The designated or potential use of the surface or ground water, the environmental media affected, the purpose for which the WQC were developed, and the latest information are to be considered in determining the relevance and appropriateness of the WQC to the response action. Therefore, the need to comply with WQC as a relevant and appropriate requirement needs to be determined on a case-by-case basis using the factors listed above.		

Α-

Action-Specific ARAR Chemical-Specific ARAR

Location- Specific ARAR L-

TBC To Be Considered

Requirement	Citation	Туре	Comment
FEDERAL WATER POLLUTION CONTROL ACT {aka Clean	Water Act (CWA)} [33 US	C 1251 e	t. seq.]
COLORADO BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER	5 CCR 1002-8		The statewide and site-specific surface water standards, and the standards associated with the site-specific use classifications, will be considered potential ARARs,
Antidegradation Rule Water Quality-Based Designations	3.1.8, (2)		except standards not associated with a use classification and AEA regulated radionuclides. Site-specific standards not associated with a use classification and
 Basic Standards Applicable to Surface Waters of the State Descriptive Standards for Substances from Point and Nonpoint Sources 	3.1.11, (1)		AEA regulated radionuclides are not ARARs because they do not meet the criteria of "general applicability" and/or enforceability in 40 CFR 300.400(g)(4) and are,
 Standards for Radioactive Materials Standards for Organics Salinity and Suspended Solids 	3.1.11, (2) 3.1.11, (3) 3.1.12	С	therefore, not "promulgated." When permanent structures are put in place so that surface waters from RFETS no longer flow into, or have the potential to flow into, immediate downstream drinking water
State Use Classifications Classifications	3.1.12		supplies, the existing domestic use classification would not be considered relevant or appropriate. DOE also intends to file a petition with the Colorado Water
 Areas Requiring Special Protection Testing Procedures Introduction - Numeric Levels 	3.1.13, (3)		Quality Control Commission to change the use classification, when these structures are emplaced. DOE
- Standard Test Procedures - Bioassay Procedures	3.1.16, (1) 3.1.16, (2)(a) 3.1.16, (2)(b)		has identified the downgradient RFETS boundary as the point of compliance.



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered L-

TBC

Requirement	Citation	Туре	Comment		
FEDERAL WATER POLLUTION CONTROL ACT {aka Clean Water Act (CWA)} [33 USC 1251 et. seq.]					
COLORADO BASIC STANDARDS FOR GROUND WATER Classifications of Ground Water Ground Water Classifications Criteria Used to Identify Classifications for Ground Water Specified Area Ground Water Quality Standards Narrative Standards Numerical Standards Statewide Standards Point of Compliance	5 CCR 1002-8, 3.11.4 (a) 3.11.4 (b) 3.11.5 (a) 3.11.5 (b) 3.11.5 (c) 3.11.6 (a) to (e)	С	Despite questions about enforceability, the Statewide ground water standards will be considered potential ARARs, except standards for AEA regulated radionuclides. DOE has identified the downgradient RFETS boundary as the point of compliance. The Colorado site-specific ground water use classifications, and their associated standards, (5 CCR 1002-8, Section 3.12.7) are not considered to be ARARs because those standards and associated use classifications have not been applied or developed consistently throughout the State. Thus the standards fail the National Contingency Plan criteria of "general applicability" in 40 CFR 300.400(g)(4) and are, therefore, not "promulgated." Also, site-specific standards for atrazine and simazine, and Statewide and site-specific standards for AEA regulated radionuclides, are not considered to be ARARs because they do not meet the general applicability/promulgated test and/or enforceability criteria. RFETS is the only industrial site in Colorado that has the State ground water use classifications of domestic use quality, agricultural use quality and surface water protection imposed upon a specific site (5 CCR 1002-8, Section 3.12.7). As the standards do not apply to any others, they are not "generally applicable" and therefore should not be used as ARARs.		
TOXIC POLLUTANT EFFLUENT STANDARDS • Toxic Pollutants • Compliance	40 CFR 129.4 40 CFR 129.5	A			

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered C -

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Requirement	Citation	Туре	Comment
FEDERAL WATER POLLUTION CONTROL ACT {aka Clean	Water Act (CWA)} [33 USC	C 1251 e	t. seq.]
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REGULATIONS • Designation of Hazardous Substances • Determination of Reportable Quantities for Hazardous Substances • Applicability of Best Management Practices • Best Management Practices Programs	40 CFR 116 40 CFR 117 40 CFR 125.102 40 CFR 125.104	A	These subparts are applicable to storage and use of products that contain toxic and hazardous pollutants above reportable quantity limitations, at a facility covered by an NPDES permit. Only substantive portions of the regulations are required under CERCLA actions for onsite activities.
DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES • Discharges Requiring Permits	33 USC 1344 33 CFR 323.3	A/L	Only substantive portions of the regulations are required under CERCLA actions for onsite activities.
DOE COMPLIANCE WITH FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS • Floodplain/Wetlands Determination • Floodplain/Wetlands Assessment • Applicant Responsibilities	10 CFR 1022 .11 .12 .13	A/L	·



Action-Specific ARAR Α-

Chemical-Specific ARAR Location- Specific ARAR To Be Considered L-TBC

Requirement	Citation	Туре	Comment	
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS				
ENDANGERED SPECIES ACT (ESA) [16 USC 1531 et seq.]				
 Purpose Preparation Requirements Request for Information Director's Response No Listed Species or Critical Habitat Present Listed Species or Critical Habitat Present Verification of Current Accuracy of Species List Contents Identical/Similar to Previous Action Permit Requirements Completion Time Submission of Biological Assessment Use of Biological Assessment 	50 CFR 402 .12(a) .12(b) .12(c) .12(d) .12(d)(1) .12(d)(2) .12(e) .12(f) .12(g) .12(h) .12(i) .12(j) .12(k)	L	Substantive compliance with the ESA is the responsibility of each Federal agency. In cases where more than one Federal agency is involved in an action a lead Federal agency, as determined among the Federal agencies participating in the action, is designated. The burden of consultation as required under ESA Section 7 and subsequent preparation of a biological assessment if appropriate is the responsibility of the lead Federal agency. Federal agencies must use the consultation process to determine if their action poses an adverse impact to threatened and endangered species and their critical habitat. It is within the spirit of the act that Federal agencies also consider candidate species, especially those species that may be headed toward listing, in their environmental planning.	
INTERAGENCY COOPERATIONInformal ConsultationFormal Consultation	50 CFR 402 .13(a),(b) .14(a)-(l)	L	The U.S. Fish and Wildlife Service will be consulted as necessary to ensure that appropriate steps are taken pursuant to the ESA to protect Federal listed threatened and endangered species and their critical habitats.	
LISTING ENDANGERED AND THREATENED SPECIES AND DESIGNATING CRITICAL HABITAT • Factors for Listing, Delisting, or Reclassifying Species • Criteria for Designating Critical Habitat	50 CFR 424 .11 .12	L		

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered L-

TBC

Requirement	Citation	Туре	Comment		
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS					
ENDANGERED AND THREATENED WILDLIFE AND PLANTS	50 CFR 17		Current lists of threatened and endangered species of animals and plants pertinent to the ESA and of concern to DOE-RFFO at the Site should be obtained from the U.S.		
List of Endangered and Threatened Wildlife	.11	L	Fish and Wildlife Service, Colorado Field Office.		
List of Endangered and Threatened Plants	.12	[
Interagency Cooperation: Critical Habitats	.94				
• Interagency Cooperation: Critical Habitats - Fish and Wildlife	.95				
Interagency Cooperation: Critical Habitats - Plants	.96				
MIGRATORY BIRD TREATY [16 USC 701-715]					
TAKING, POSSESSION, TRANSPORTATION, SALE, PURCHASE, BARTER, EXPORTATION, AND IMPORTATION OF WILDLIFE AND PLANTS					
The Purpose of the Regulation	50 CFR 10.1	L			
List of Migratory Birds	50 CFR 10.13				
Law Enforcement Offices	50 CFR 10.22				
Civil Procedures	50 CFR 11				
EAGLE PROTECTION ACTS [16 USC 668 et. seq.]					
BALD AND GOLDEN EAGLES					
Prohibited Acts; Criminal Penalties	16 USC 668(a)				
Civil Penalties	16 USC 668(b)				
Cancellation of Grazing Agreements	16 USC 668(c)	L			
• Taking and Using of the Bald and Golden Eagle for Scientific,	16 USC 668a				
Exhibition, and Religious Purposes					
Enforcement Provisions	16 USC 668b				



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered **C** -

L-TBC

Requirement	Citation	Туре	Comment		
NATURAL RESOURCE AND WILDLIFE PROTECTION LA	NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS				
COLORADO NONGAME, ENDANGERED, OR THREATENED SPECIES CONSERVATION ACT [CRS 33-1-115, 33-2-101 to 33-2-107]					
 Willful Destruction of Wildlife Damage or Destruction of Dens or Nests - Harassment of Wildlife 	CRS 33-6-117 CRS 33-6-128	L			
 COLORADO NONGAME WILDLIFE Protected Species Endangered Wildlife - Designation of Species Threatened Wildlife - Designation of Species Nongame Wildlife - Designation of Species 	2 CCR 406-8 Article I, #1000 Article II, #1002 Article III, #1003 Article IV, #1004	L			



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered L-TBC

Requirement	Citation	Туре	Comment		
NATURAL RESOURCE AND WILDLIFE PROTECTION	NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS				
FISH AND WILDLIFE COORDINATION ACT [16 USC 6	61 et seq.]				
 Purpose Impounding, Diverting, or Controlling of Waters Impoundment or Diversion of Waters Rules and Regulations Effects of Sewage and Industrial Waters Authorization of Appropriations Penalties Definitions 	16 USC 661 16 USC 662 16 USC 663 16 USC 664 16 USC 665 16 USC 666 16 USC 666a 16 USC 666b	A/L			

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered C-

L-TBC

Requirement	Citation	Туре	Comment	
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS				
NATIONAL HISTORIC PRESERVATION ACT (NHPA) [16 US	C 470 et. seq.]			
IDENTIFYING HISTORIC PROPERTIES	36 CFR 800			
 Assessing Information Needs Locating Historic Properties Evaluating Historical Significance Whe No Historic Properties are Found Historic Property Found 	.4(a) .4(b) .4(c) .4(d) .4(e)	L	·	
ASSESSING EFFECTS OF THE ACTIVITY ON THE PROPERTY	36 CFR 800.5(a)-(e)	L		
DOCUMENTATION REQUIREMENTS	36 CFR 800.8(a)-(d)	L		
CRITERIA OF EFFECT AND ADVERSE EFFECT	36 CFR 800.9(a)-(c)	L		
PROTECTING NATIONAL HISTORIC LANDMARKS	36 CFR 800.10	L		
HISTORIC PROPERTIES DISCOVERED DURING IMPLEMENTATION	36 CFR 800.11	L	-	
EMERGENCY UNDERTAKINGS	36 CFR 800.12	L		
PRESERVATION OF AMERICAN ANTIQUITIES	43 CFR 3	L		
PROTECTION OF ARCHEOLOGICAL RESOURCES	43 CFR 7	L		

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered L-TBC



DLOGICAL RESOURCES	ICRS 2				
DLOGICAL RESOURCES	ICRS 2				
	10100	COLORADO HISTORICAL, PREHISTORICAL, AND ARCHAEOLOGICAL RESOURCES [CRS 24-80-401 TO 410]			
ARCHAEOLOGICAL RESOURCES PROTECTION ACT [16 USC 470, Chapter 1B]					
36 CFR 296					
.2					
.4 .5 .6					
.7					
.12	L				
.13 .14					
.15 .16					
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Action-Specific ARAR Chemical-Specific ARAR Location-Specific ARAR L-

Requirement	Citation	Туре	Comment		
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS					
ARCHAEOLOGICAL AND HISTORICAL PRESERVATION ACT (AHPA) [16 USC 469a-1]					
 Notification and Request for Preservation of Data Survey of Sites; Preservation of Data; Compensation 	16 USC 469a-1(a) 16 USC 469a-1(b)	L	Differs from NHPA in that it encompasses a broader scope of resources than those listed on the National Register and requires only preservation of the data (including analysis and publication).		

Action-Specific ARAR A -

Chemical-Specific ARAR
Location- Specific ARAR
To Be Considered **C** -

L-TBC

Requirement	Citation	Туре	Comment		
SAFE DRINKING WATER ACT (SDWA) [42 USC 300f et. seq.]					
COLORADO PRIMARY DRINKING WATER REGULATIONS	5 CCR 1003-1, [40 CFR 141]		These regulations may be relevant and appropriate to surface water under their current use classifications.		
 MCL for Microbiological Contaminants MCL for Turbidity MCLs for Inorganic Chemicals MCLs for Organic Chemicals MCL for Volatile Organic Chemicals (VOCs) MCL for Total Trihalomethanes (TTHMs) MCLs for Synthetic Organic Chemicals (SOCs) MCLs for Radioactivity MCLs for Radium-226, Radium-228, and Gross Alpha Particle Activity in Community Water Systems MCLs for Beta Particle and Photon Radioactivity From Man-Made Radionuclides in Community Water Systems 	3.1.2 4.1.1 5.2.1 5.2.2 5.2.4 5.2.3 6.1.1 6.1.2	С	When permanent structures are put in place so that surface waters from RFETS no longer flow into, or have the potential to flow into, immediate downstream drinking water supplies, the existing domestic use classification would not be considered relevant or appropriate. When these structures are in place, the MCLs (MCLGs) will not be relevant and appropriate.		
 MAXIMUM CONTAMINANT LEVEL GOALS MCLGs for Organic Contaminants MCLGs for Inorganic Contaminants MCLGs for Microbiological Contaminants 	40 CFR 141 .50 .51 .52	С	Non-zero MCLGs would also be relevant and appropriate to surface water possessing drinking water supply use classifications. MCLGs equal to zero establish unattainable goals and are therefore not ARARs according to the NCP.		

Action-Specific ARAR Α-

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Chemical-Specific ARAR Location- Specific ARAR L -To Be Considered TBC

Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
The State of Colorado is authorized to administer portions of the hazardous waste management program (e.g., RCRA) to regulate the generation, treatment, storage, and disposal of hazardous waste within Colorado. As such, the Colorado regulations would be applicable to the management of hazardous waste. These regulations may also be relevant and appropriate in situations where a remediation waste is "sufficiently similar" to a RCRA-listed waste (e.g., waste which was generated and disposed of prior to the effective date of regulation) or when the proposed remedial action is similar to a RCRA-regulated activity and would be appropriate to ensure that the activity is protective of human health and the environment. Although the Colorado hazardous waste management regulations are similar to the federal requirements, both the federal and state regulatory citations are provided for reference purposes and to denote that both federal and state requirements were considered in establishing the identifying the ARAR requirement adopted for the remediation of the RFETS. Only substantive portions of the regulations are required under CERCLA actions for onsite activities.				
SITING OF HAZARDOUS WASTE DISPOSAL SITES	6 CCR 1007-2			
Minimum Design Performance Criteria for Off-Site Hazardous Waste Disposal Sites and On-Site Hazardous Waste Landfills	Part 2.4	L		
Requirements for Siting and Design of Off-Site Hazardous Waste Disposal Sites and On-Site Hazardous Waste Landfills	Part 2.5			
GENERATOR STANDARDS	6 CCR 1007-3, 262 [40 CFR 262]	-	Persons who generate solid wastes are required to determine if the waste is hazardous. The definition and procedures contained in 6 CCR 1007-3, 261 [40]	
Hazardous Waste Determinations Record Keeping and Reporting Requirements	.11	Α	CFR 261] are to be followed to make this determination.	
- Record Keeping and Reporting	.40 to .43			

TBC



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered C -

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Requirement	Citation	Туре	Comment		
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]					
GENERAL FACILITY STANDARDS	6CCR 1007-3, 264 Subpart B [40CFR 264 Subpart B]				
Waste Analysis	.13(a)(1) to (3)	A/L	·		
Security	.14	A/L	Existing security measurements will be used and, where necessary, upgraded to prevent unknowing access to hazardous wastes.		
General Inspection Requirements	.15(a) to (c)	A/L	Inspections will be conducted as a standard of control to prevent release of hazardous waste constituents to the environment or a threat to human health. Corrective actions will be taken resolve deficiencies.		
Personnel Training	.16	C/A	Personnel will be properly trained to prevent mismanagement of hazardous waste and/or regulatory violations.		
General Requirements For Ignitable, Reactive, Or Incompatible Wastes	.17(a) and (b)	C/A	Procedures will be implemented to prevent accidental ignition or reaction of ignitable or reactive waste, or the mixing of incompatible waste.		
Construction Quality Assurance Program	.19	A/L	A construction QA program will be implemented for the construction of any new hazardous waste disposal site.		



Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered **C** -

L-TBC

Requirement	Citation	Туре	Comment		
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]					
Installation Standards • Seismic Considerations • Installation Standards • Installation Standards - Floodplains - Hazardous Waste Disposal	6 CCR 1007-3, 264, Subpart B [40 CFR 264, Subpart B] .18(a) .18(b) .18(d)	A/L	Hazardous waste management facilities will not be located within a 100-year floodplain. Hazardous waste is not to be disposed directly under or into surface water or groundwater that has a potential or existing beneficial use or that is in direct communication with an aquifer, unless said disposal is accomplished pursuant to a UIC permit.		
 PREPAREDNESS AND PREVENTION Design and Operation of Facility Required Equipment Testing and Maintenance of Equipment Access to Communications or Alarm System Required Aisle Space Arrangements with local Authorities 	6 CCR 1007-3, 264, Subpart C [40 CFR 264, Subpart C] .31 .32 .33 .34 .35 .37	A/L	Hazardous waste facilities will be designed to minimize the potential for incidents. Equipment will be provided to respond to credible incidents and arrangements with emergency response units will be executed.		

Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR Α-

C -L-

To Be Considered TBC

Requirement	Citation	Туре	Comment		
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]					
 CONTINGENCY PLAN AND EMERGENCY PROCEDURES Purpose and Implementation Content of Plan Emergency Coordinator Emergency procedures 	6 CCR 1007-3, 264, Subpart D [40 CFR 264 Subpart D] .51(a) .52(a) .55 .56(a) to (i)	Α	The existing RFETS contingency plan will be reviewed and revised accordingly to ensure that the procedures are adequate to respond to any new conditions posed by the remedial actions and/or the operation of new hazardous waste management facilities.		
 GROUND WATER PROTECTION Required Programs Point of Compliance 	6 CCR 1007-3, 264, Subpart F [40 CFR 264, Subpart F] .91(a) .95	A/L	Groundwater monitoring will be conducted for hazardous waste for hazardous waste management units to ensure that contaminants which could adversely impact human health or the environment are not migrating into groundwaters as measured at the point of compliance. The point of compliance for hazardous waste disposal units at which waste will remain after closure of the RFETS is interpreted to be the RFETS site boundary.		



To Be Considered TBC

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C -L-

Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR

Requirement	Citation	Туре	Comment		
	SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
 GROUND WATER PROTECTION (continued) Ground-Water Protection Standard Hazardous Constituents Concentration Limits 	6 CCR 1007-3, 264, Subpart F [40 CFR 264, Subpart F] .92 .93 .94(a) and (b)	С	As part of the RFI/RI and CMS/FS process, remediation goals which are protective of human health and the environment will be established for the cleanup of groundwater. The RCRA process for establishing groundwater protection standards will be incorporated when selecting the remedial goals. Included in the selection process are background concentrations, drinking water standards (e.g., MCLs), and alternative concentration limits (ACLs). It is intended to establish ACLs that will maintain the designated use of the water quality {i.e., MCLs and Colorado water quality standards - 5 CCR 1002-8, Section 3.11.5} at the RFETS boundary.		
 GROUND WATER PROTECTION (continued) Compliance Period General Ground-Water Monitoring Requirements Number of Wells Casing Sampling and Analysis Procedures Statistical Methods Utilized 	6 CCR 1007-3, 264, Subpart F [40 CFR 264, Subpart F] .96 .97(a) and (b) .97(c) .97(d) to (g) .97(h) and (i)	Α	For any hazardous waste remaining onsite following the completion of closure activities, groundwater monitoring will be performed to demonstrate protectiveness of the selected remedial actions. For monitoring that is being conducted as part of a RCRA corrective action, compliance period is extended until it can demonstrate that the ground-water protection standard has not been exceeded for a period of three consecutive years. The five-year review provisions of CERCLA Section 121(c) {see 40 CFR 300.430(f)(4)(ii)} will be considered in establishing the compliance period. Any additional monitoring wells that are installed as a result of remedial activities for the monitoring of hazardous waste management sites will conform to existing approved RCRA groundwater monitoring program.		

Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered Α-

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L-TBC

Requirement	Citation	Туре	Comment		
	SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
 Detection Monitoring Program Parameters or Constituents System and Procedures Statistical Exceedences Compliance Monitoring Program Monitoring Installation of System Sampling Procedures and Statistical Methods Evidence of Increased Contamination Flow Rates Corrective Action Program Compliance with Groundwater Protection Standard Prevent Hazardous Constituents from Exceeding Concentration Limits Time Frame Groundwater Monitoring Corrective Action Measures Corrective Action for Solid Waste Management Units 	6 CCR 1007-3, 264, Subpart F [40 CFR 264, Subpart F] .98(a) .98(b) to (f) .98(g) .99(a) .99(b) .99(c), (f), and (g) .99(d) .99(e) .100(a) .100(b) .100(c) .100(d) .100(e) and (f) .101(a) and (c)	A	Per the IAG, the RCRA corrective action provisions are being integrated with the CERCLA remedial action provisions. Therefore, the Parties intend that compliance with activities covered by the IAG will be deemed to achieve compliance with CERCLA, 42 USC § 9601 et seq.; to satisfy the corrective action requirements of sections 3004(u) and (v) of RCRA, 42 USC § 6924(u) and (v), for a RCRA permit, and section 3008(h), 42 USC § 6928(h), for interim status facilities; the closure and corrective action requirements of CHWA; and to meet or exceed all applicable or relevant and appropriate Federal and State laws and regulations, to the extent required by section 121 of CERCLA, 42 USC § 9621.		



Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR A -

C -

L-To Be Considered TBC

Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
CLOSURE AND POST-CLOSURE	6 CCR 1007-3, 264, Subpart G [40 CFR 264, Subpart G]		The substantive requirements for closure and post- closure will be complied with.	
 Closure Performance Standards Disposal or Decontamination of Equipment, Structures and Soils Maintenance, Monitoring, Security, and Care Post-Closure Use of Property 	.111 .114 .117(a)(1) and (b) .117(c)	A		
USE AND MANAGEMENT OF CONTAINERS	6 CCR 1007-3, 264, Subpart I [40 CFR 264, Subpart I]		Hazardous waste containers will be managed in accordance with approved handling procedures and be stored at RCRA permitted storage areas and/or designated temporary units. Container storage areas	
Condition of Containers	.171		will be closed in accordance with approved closure plans or IM/IRA documents.	
Compatibility of Waste with Containers	.172			
Management of Containers	.173	Α		
• Inspections	.174			
Containment				
- Containment System Design and Operation	.175(b) to (d)			
- Containment for Ignitable or Reactive Wastes	.176			
- Containment for Incompatible Wastes	.177			
Closure	.178		,	



Α -Action-Specific ARAR

Chemical-Specific ARAR Location- Specific ARAR To Be Considered C -

L-TBC

Requirement	Citation	Туре	Comment		
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]					
 Design and Installation of New tank Systems or Components Containment and Detection of Releases Secondary Containment Design and Construction Secondary Containment Devices External Liner Vault System Double-Walled Tanks Ancillary Equipment General Operating Requirements Inspections Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems Closure and Post-Closure Care Special Requirements for Ignitable or Reactive Wastes Special Requirements for Incompatible Wastes 	6 CCR 1007-3, 264, Subpart J [40 CFR 264, Subpart J] .192 .193(a) and (b) .193(c) .193(d) .193(e)(1) .193(e)(2) .193(e)(3) .193(f) .194 .195 .196 .197 .198 .199	A	Either existing or new tank systems will be used to treat or store hazardous waste generated as a result of remedial activities. Existing tank systems will only be used if it is determined that the tank system is adequate and has sufficient integrity to prevent failure of the tank system during the proposed new use. Existing tank systems will be closed in accordance with approved closure plans or IM/IRA documents.		
 SURFACE IMPOUNDMENTS Monitoring and Inspection Closure and Post-Closure Care 	6 CCR 1007-3, 264, Subpart K [40 CFR 264, Subpart K] .226 .228	A	All existing hazardous waste surface impoundments (e.g., Solar Evaporation Ponds) have been removed from service and are currently being closed. The closure. post-closure, and construction inspection requirements are included as part of the OU4 IM/IRA. In the event surface impoundments units are identified as part of a potential remedy Subpart K will become an ARAR.		

Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR

L-To Be Considered TBC

Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
WASTE PILES	6 CCR 1007-3, 264, Subpart L [40 CFR 264, Subpart L]		There are no current or planned waste piles at the RFETS; therefore, the Subpart L provisions are not being listed as an ARAR.	
LAND TREATMENT	6 CCR 1007-3, 264, Subpart M [40 CFR 264 Subpart M]		In the event land treatment units are identified as part of a potential remedy, Subpart M will become an ARAR.	
LANDFILLS	6 CCR 1007-3, 264, Subpart N [40 CFR 264 Subpart N]		Not an ARAR because any onsite disposal will be under the CAMU rule.	
INCINERATORS	6 CCR 1007-3, 264, Subpart O [40 CFR 264, Subpart O]		These regulations are ARARs for the closure and/or the design, construction, and operation of a new incinerator system.	
 Waste Analysis Principal Organic Hazardous Constituents Performance Standards Operating Requirements Monitoring and Inspections Closure 	.341 .342 .343(a) to (c) .345 .347 .351	A		

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered C-

L-TBC

Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS	6 CCR 1007-3, 264, Subpart S [40 CFR 264, Subpart S]		Colorado has adopted a CAMU/TU rule. The provisions for designated CAMUs and TUs will be followed to facilitate implementation of a corrective action.	
 Corrective Action Management Units Standards for Designating a CAMU Requirements for Groundwater Monitoring Closure Requirements for CAMUs Temporary Units Requirements for TUs Factors for Establishing Standards for TUs 	.552(c) and (d) .552(e)(3) .552(e)(4) .553(b) .553(c)	A		
MISCELLANEOUS UNITS	6 CCR 1007-3, 264, Subpart X [40 CFR 264, Subpart X]		These standards are being listed as ARARs in the event that a miscellaneous unit is selected for the treatment of hazardous waste pursuant to the CMS/FS process.	
 Environmental Performance Standards Groundwater and Subsurface Protection Surface Water, Wetland and Surface Soil Protection Air Protection Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action 	.601(a) .601(b) .601(c) .602	A		
Post-Closure Care	.603			



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR **C** -

L-To Be Considered TBC

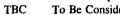
Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
AIR EMISSION STANDARDS FOR PROCESS VENTS	6 CCR 1007-3, 264, Subpart AA [40 CFR 264 Subpart AA]	·A	These standards will be incorporated into the design of process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations	
 Standards: Process Vents Standards: Closed-Vent Systems and Control Devices 	.1032(a) to (c) .1033	A	of at least 10-ppm (by weight).	
Test Methods and Procedures	.1034)	•	
Record Keeping Requirements	.1035			
Reporting Requirements	.1036			

Action-Specific ARAR Chemical-Specific ARAR

Location- Specific ARAR L-

Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS	6 CCR 1007-3, 264, Subpart BB [40 CFR 264, Subpart BB]		These standards will be incorporated into the design of remediation equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight excluding equipment that is in vacuum service.	
Standards: Pumps in Light Liquid Service	.1052		is in vacuum service.	
Standards: Compressors	.1053			
Standards: Pressure Relief Devices in Gas/Vapor Service	.1054			
Standards: Sampling Connecting Systems	.1055			
Standards: Open-Ended Valves or Lines	.1056			
Standards: Valves in Gas/Vapor or Light Liquid Service	.1057		·	
Standards: Pumps and Valves in Heavy Liquid Service,	.1058	Α		
Pressure Relief Devices in Light or Heavy Liquid Service,			.)	
Flanges, and Other Connectors		!		
Standards: Closed-Vent Systems and Control Devices	.1060			
Alternative Standards for Valves in Gas/Vapor Service or in	.1061			
Light Liquid Service: Percentage of Valves Allowed to Leak	Į.			
Alternative Standards for Valves in Gas/Vapor Service or in	.1062	,		
Light Liquid Service: Skip Period Leak Detection and Repair				
Test Methods and Procedures	.1063		,	
Record Keeping Requirements	.1064			
Reporting Requirements	.1065			

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered C -

Requirement	Citation	Туре	Comment		
	SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
CONTAINMENT BUILDINGS	6 CCR 1007-3, 264, Subpart DD [40 CFR 264 Subpart DD]	A	These standards will be incorporated into the design of a containment building that is built to facilitate the management of hazardous remediation waste.		
 Design and Operating Standards Closure and Post-Closure Care 	.1101 .1102				
AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS (PROPOSED)	56 FR 33490, Proposed Rule for 40 CFR 264, Subpart CC	ТВС			
IDENTIFICATION AND LISTING OF HAZARDOUS WASTE	40 CFR 267	A	Waste management plans will be developed to ensure compliance with the specific classes of hazardous waste (i.e., Recyclable Materials Used In a Manner Constituting Disposal, Burning for Energy Recovery, Recyclable Materials Utilized for Precious Metal Recovery, and Spent Lead-Acid Batteries Being Reclaimed) identified in this regulation.		

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered **C** -

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Requirement	Citation	Туре	Comment	
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
LAND DISPOSAL TREATMENT STANDARDS	6 CCR 1007-3, 268 [40 CFR 268]			
 General (Subpart A) Dilution Prohibition as a Substitute for Treatment Waste Analysis Special Rules Regarding Wastes that Exhibit a Characteristic 	.3 .7 .9	A	Waste management plans will be developed to ensure compliance with the Land Disposal Restrictions. The performance requirements for hazardous waste treatment systems will be based on the LDR Treatment Standards contained in Subpart C.	
 Prohibitions on Land Disposal (Subpart C) Waste Specific Prohibitions - Solvent Wastes Waste Specific Prohibitions - Dioxin-Containing Wastes Waste Specific Prohibitions - California List Wastes Waste Specific Prohibitions - First Third Wastes Waste Specific Prohibitions - Second Third Wastes Waste Specific Prohibitions - Third Third Wastes Waste Specific Prohibitions - Newly Listed Wastes 	.30 .31 .32 .33 .34 .35	A		



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered

L-TBC

Requirement	Citation	Type	Comment		
li'	SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS §§ 25-15-101 to -217)]				
LAND DISPOSAL TREATMENT STANDARDS (continued)	6 CCR 1007-3, 268 [40 CFR 268]				
 LDR Treatment Standards (Subpart D) Treatment Standards Expressed as Concentrations in Waste Extract Treatment Standards Expressed as Specified Technologies Treatment Standards Expressed as Waste Concentrations Variance from a Treatment Standard 	42 USC § 6924(d)(2) .41 .42 .43 .44	A	In addition to these regulations, EPA has recently promulgated Universal Treatment Standards and consolidated treatment standards for hazardous waste (see 59 FR 47982). This final rule is effective on December 19, 1994 in both authorized and non-authorized States. The final rule replaces the current LDR treatment standard tables contained in Subpart D. Authorized States are required to amended their regulations to obtain final authorization of the RCRA program. This final rule is considered to be an ARAR for remedial actions. In addition, EPA proposed a rule for the treatment of hazardous soils (see FR 48092). This proposed rule is considered to be a TBC for the treatment of contaminated soils.		
Prohibition on Storage of Restricted Waste (Subpart E)	.50	A			



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered C -

L-TBC

Requirement	Citation	Type	Comment			
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE D: STATE OR REGIONAL SOLID WASTE PLANS COLORADO SOLID WASTE SITES AND FACILITIES [6 CCR 1007-2, Part 1]						
CLOSURE AND POST-CLOSURE		i	These regulations have been identified as potential ARARs with respect to closure of solid waste disposal sites.			
 Minimum Standards Closure of Solid Waste Disposal Sites and Facilities 	Section 2.5.1 to 2.5.9 [40 CFR 258.60 (a)-(h)]		,			
- Post-Closure Care and Maintenance Standards	Section 2.6.1 to 2.6.2 [40 CFR 258.61 (a)-(e)]	A				
Standards for Solid Waste Disposal Landfill Sites and Facilities Closure	Section 3.5.1 to 3.5.8 [40 CFR 258.60 (a)-(h)]					
- Post-Closure Care and Maintenance	Section 3.6.1 to 3.6.3 [40 CFR 258.61 (a)-(e)]					

TBC



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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered **C** -

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Requirement	Citation	Туре	Comment			
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE I: REGULATION OF UNDERGROUND STORAGE TANKS [CRS §§ 8-20-501 to -608; CRS §§ 25-18-101 to -109]						
UNDERGROUND STORAGE TANK REQUIREMENTS	7 CCR 1101-14 6 CCR 1007-5 [40 CFR 280]	A				

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Action-Specific ARAR Chemical-Specific ARAR **C** -

Location- Specific ARAR
To Be Considered L-

TBC



Requirement	Citation	Туре	Comment		
TOXIC SUBSTANCES CONTROL ACT (TSCA) [15 USC 2601 et seq.]					
LABELING OF PCBs AND PCB ITEMS	40 CFR 761.40 and .45	A			
DISPOSAL REQUIREMENTS	40 CFR 761		Waste management plans will be developed to ensure compliance with the specific requirements for PCB waste identified in this regulation.		
Liquid, Non-liquid PCB Waste	.60(a)				
PCB Articles	.60(b)	Α			
PCB Containers	.60(c)				
Spills	.60(d)				
Testing Procedures	.60(g)				
STORAGE REQUIREMENTS FOR PCBs	40 CFR 761				
Time Limits	.65(a)				
Facility Criteria	.65(b) and (c)(3)				
Temporary Storage	.65(c)(1) and (4)	Α			
Inspections	.65(c)(5)		_		
Container Specifications	.65(c)(6) and (7)(i)				
Marking	.65(c)(8)				
Laboratory Sample Exemption From Manifesting	.65(i)(2)(3)				
INCINERATION	40 CFR 761		These regulations would only be ARARs for the construction and operation of an onsite PCB incinerator; it		
Liquid PCBs	.70(a)(1) to (9)	A	is envisioned that this will not occur.		
- Operating Requirements					
Nonliquid PCBs	.70(b)(1) and (2)				

To Be Considered TBC

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Action-Specific ARAR Chemical-Specific ARAR **C** -

L-Location- Specific ARAR

Requirement	Citation	Туре	Comment		
TOXIC SUBSTANCES CONTROL ACT (TSCA) [15 USC 2601 et seq.]					
CHEMICAL WASTE LANDFILLS	40 CFR 761		These regulations would only be ARARs for the construction and operation of an onsite PCB disposal cell; it is envisioned that this will not occur.		
 Technical Requirements Soils Synthetic Membrane Liners Hydrologic Conditions Flood Protection Topography Monitoring Systems Leachate Collection 	.75(b)(1) .75(b)(2) .75(b)(3) .75(b)(4) .75(b)(5) .75(b)(6) .75(b)(7)	A			
DECONTAMINATION • Containers • Movable Equipment	40 CFR 761.79(a) 40 CFR 761.79(b)	A			
 PCB SPILL CLEANUP Requirements for PCB Spill Cleanup Disposal of Cleanup Debris and Materials Determination of Spill Boundaries Spills of < 500 ppm PCBs, Involve < 1 lb of PCBs by wt. Spills of ≥ 500 ppm PCBs, Involve ≥ 1 lb of PCBs by wt. Time Limits and Actions Within the First 24 Hours Requirements for Decontaminating Spills in Outdoor Electrical Substations Requirements for Decontaminating Spills in Restricted Access Areas 	40 CFR 761 .125(a)(2) .125(a)(3) .125(b)(1) .125(c)(2) to (4) .125(c)(1) .125(c)(2) .125(c)(3)(i) to (v)	ТВС	40 CFR 761 Subpart G is entitled PCB Spill Cleanup Policy and thus many of the sections in Subpart G, specifically for spills after May 4, 1987, are "to be considered" (TBC); 40 CFR 761.125 contains PCB cleanup requirements that may be considered enforceable substantive environmental standards and thus potential ARARs.		
- Requirements for Decontaminating Spills in Restricted Access	.125(c)(3)(i) to (v) .130(a) to (e)				

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Action-Specific ARAR Chemical-Specific ARAR Location- Specific ARAR To Be Considered **C** -

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TBC